Claims

1.   Method for controlling a process flow,
characterized by the following steps.

5   a)   A number of ideal characteristic variables of the process
                 flow are determined in advance, which in each case
                 describe a sub-aspect of the process flow in such a way
                 that by means of the ideal characteristic variables a
                 desired target process flow of the process flow is
10   defined,

           b)   During the process flow, actual characteristic variables
                 of the sub-aspects of the process flow are determined at
                 an observation time point, so that the actual state of
                 the process flow in the observation time period is
15   described by means of the actual characteristic
                 variables,

           c)   By means of a good functional, the deviations of the
                 actual characteristic variables from the corresponding
                 ideal characteristic variables are determined, with the
20   changes over time of the actual characteristic variables
                 being included by the good functional, and

           d)   by means of a visualization system, the ideal
                 characteristic variables are represented as an optimum
                 point in a center area of a display field of the
25   visualization system and the actual characteristic
                 variables are in each case shown as an actual point at a
                 distance from the optimum point, that in each case is in
                 a relationship to the deviation of the corresponding
                 actual characteristic variable from the corresponding
30   ideal characteristic variable, with the actual points
                 being graphically connected by connecting lines as an
                 option so that the area enclosed by the connecting lines
                 is a measure of the quality of the process flow in the
                 observation time period.

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2.   Device for controlling a process flow by means of a data
processing system,

characterized by

- a storage area in which a number of ideal characteristic variables
  of the process flow can be stored, that in each case describe a
  sub-aspect of the process flow such that a desired target process
5 flow of the process flow is defined by means of the ideal
  characteristic variables,

- a calculation module by means of which actual characteristic
  variables of the sub-aspects of the process flow can be determined
  in an observation time period during the process flow, so that the
10 actual state of the process flow in the observation time period is
  described by means of the actual characteristic variables, and by
  means of which a good functional can determine the deviations of
  the actual characteristic variables from the corresponding ideal
  characteristic variables, with the good functional including the
15 changes over time of the actual characteristic variables, and

- a visualization system by means of which the ideal characteristic
  variables can be represented as an optimum point in a central area
  of a display field of the visualization system and the actual
  characteristic variables can in each case be represented as an
20 actual point at a distance from the optimum point that in each case
  is in relation to the deviation of the corresponding actual
  characteristic variable from the corresponding ideal characteristic
  variable, with the actual points being graphically connected by
  connecting lines as an option, so that the area enclosed by the
25 connecting lines is a measure of the quality of the process flow in
  the observation time period.